

CLAIMS

1. A gas turbine engine exhaust nozzle comprising a row of laterally sinuous chevrons extending from an aft end of an exhaust duct and spaced laterally apart to define complementary axially diverging sinuous slots, and each of said chevrons has a shallow compound contour bowl therein.
2. A nozzle according to claim 1 wherein said chevrons are laterally contiguous around said duct, and tangentially blend therewith, with said bowls terminating thereat.
3. A nozzle according to claim 2 wherein:
each of said chevrons has radially outer and inner surfaces bound by a laterally sinuous trailing edge extending aft from a base of said chevron adjoining said duct to an axially opposite apex of said chevron; and
said chevrons have a compound arcuate contour defining said bowls both axially between said bases and apexes, and laterally across said chevrons.
4. A nozzle according to claim 3 wherein:
said duct includes a radially inner surface; and
said chevron inner surfaces at said bases are laterally and radially coextensive with said duct inner surface.
5. A nozzle according to claim 4 wherein said chevrons and slots are generally laterally coextensive for minimizing radially inward projection of said chevrons.
6. A nozzle according to claim 5 wherein said sinuous chevron trailing edges are arcuate around said chevron apexes, and joined together in arcuate fillets between adjacent chevrons.
7. A nozzle according to claim 6 wherein said chevron trailing edges are laterally sinuous between said arcuate fillets and said arcuate apexes.

8. A nozzle according to claim 7 wherein said chevron trailing edges are sinusoidal, and said slots are complementary sinusoidal.
9. A nozzle according to claim 8 wherein:
said chevron outer surface is convex;
said chevron inner surface is concave; and
said chevron apexes are coplanar.
10. A nozzle according to claim 9 wherein said chevrons have a constant thickness, and said chevron surface is coextensive with an outer surface of said duct.
11. A gas turbine engine exhaust nozzle comprising:
an exhaust duct including a plurality of laterally adjoining chevrons extending from an aft end thereof;
each of said chevrons having radially outer and inner surfaces bound by a laterally sinuous trailing edge extending between a base of said chevron adjoining said duct and an axially opposite apex of said chevron; and
said chevrons having a compound arcuate contour both axially and laterally.
12. A nozzle according to claim 11 wherein said chevrons are spaced laterally apart to define complementary axially diverging sinuous slots disposed in flow communication with said duct for channeling exhaust radially therethrough.
13. A nozzle according to claim 12 wherein:
said duct includes a radially inner surface for bounding said exhaust; and
said chevron inner surfaces at said bases are laterally and radially coextensive with said duct inner surface.
14. A nozzle according to claim 13 wherein said chevrons and slots are generally laterally

coextensive for minimizing radial projection of said chevrons into said exhaust.

15. A nozzle according to claim 14 wherein said sinuous chevron trailing edges are arcuate around said chevron apexes, and joined together in arcuate fillets between adjacent chevrons.

16. A nozzle according to claim 15 wherein said chevron trailing edges are sinuous from said fillets aft toward said chevron apexes, and from said chevron apexes forward toward said fillets.

17. A nozzle according to claim 16 wherein said chevron trailing edges include an inflection point axially between said apexes and fillets.

18. A nozzle according to claim 16 wherein said chevron trailing edges are continuously sinuous from said fillets to said apexes.

19. A nozzle according to claim 16 wherein said chevron trailing edges are sinusoidal, and said slots are complementary sinusoidal.

20. A nozzle according to claim 16 wherein said chevron outer surface is convex, said chevron inner surface is concave and defines a compound bowl.

21. A nozzle according to claim 16 wherein said exhaust duct is circular, and said chevrons are non-circular.

22. A nozzle according to claim 16 wherein said chevrons have a constant thickness.

23. A nozzle according to claim 16 wherein said chevrons have equal lengths from said bases to said apexes.

24. A nozzle according to claim wherein said chevron apexes are coplanar.
25. A nozzle according to claim 16 wherein said chevron outer surface is coextensive with an outer surface of said duct.
26. A nozzle according to claim 16 wherein said exhaust duct comprises a core engine nozzle including a center plug converging aft therein and terminating aft of said chevron apexes.